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#7

# SEQUENCE LISTING

<110> Petrini, John H.J.  
Morgan, William Franklin  
Maser, Richard Scott  
Carney, James Patrick

<120> DNA Encoding A DNA Repair Protein

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<140> US 09/067,641

<141> 1998-04-27

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<213> Homo sapiens

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<212> PRT

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			20					25					30		

Ile Leu Ile Glu Asn Asp Gln Ser Ile Ser Arg Asn His Ala Val Leu  
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 50 55 60  
 Val Leu Thr Leu Lys Asp Asn Ser Lys Tyr Gly Thr Phe Val Asn Glu  
 65 70 75 80  
 Glu Lys Met Gln Asn Gly Phe Ser Arg Thr Leu Lys Ser Gly Asp Gly  
 85 90 95  
 Ile Thr Phe Gly Val Phe Gly Ser Lys Phe Arg Ile Glu Tyr Glu Pro  
 100 105 110  
 Leu Val Ala Cys Ser Ser Cys Leu Asp Val Ser Gly Lys Thr Ala Leu  
 115 120 125  
 Asn Gln Ala Ile Leu Gln Leu Gly Gly Phe Thr Val Asn Asn Trp Thr  
 130 135 140  
 Glu Glu Cys Thr His Leu Val Met Val Ser Val Lys Val Thr Ile Lys  
 145 150 155 160  
 Thr Ile Cys Ala Leu Ile Cys Gly Arg Pro Ile Val Lys Pro Glu Tyr  
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 Phe Thr Glu Phe Leu Lys Ala Val Gln Ser Lys Lys Gln Pro Pro Gln  
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 Ile Glu Ser Phe Tyr Pro Pro Leu Asp Glu Pro Ser Ile Gly Ser Lys  
 195 200 205  
 Asn Val Asp Leu Ser Gly Arg Gln Glu Arg Lys Gln Ile Phe Lys Gly  
 210 215 220  
 Lys Thr Phe Ile Phe Leu Asn Ala Lys Gln His Lys Lys Leu Ser Ser  
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 Ala Val Val Phe Gly Gly Gly Glu Ala Arg Leu Ile Thr Glu Glu Asn  
 245 250 255  
 Glu Glu Glu His Asn Phe Phe Leu Ala Pro Gly Thr Cys Val Val Asp  
 260 265 270  
 Thr Gly Ile Thr Asn Ser Gln Thr Leu Ile Pro Asp Cys Gln Lys Lys  
 275 280 285  
 Trp Ile Gln Ser Ile Met Asp Met Leu Gln Arg Gln Gly Leu Arg Pro  
 290 295 300  
 Ile Pro Glu Ala Glu Ile Gly Leu Ala Val Ile Phe Met Thr Thr Lys  
 305 310 315 320  
 Asn Tyr Cys Asp Pro Gln Gly His Pro Ser Thr Gly Leu Lys Thr Thr

325 330 335  
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 Met Pro Ser Ala Pro Val Asn Thr Thr Thr Tyr Val Ala Asp Thr Glu  
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 Lys Val Ser Lys Met Glu Gln Lys Phe Arg Met Leu Ser Gln Asp Ala  
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 Pro Thr Val Lys Glu Ser Cys Lys Thr Ser Ser Asn Asn Asn Ser Met  
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 465 470 475 480  
 Ala Arg Ile Glu Thr Ser Cys Ser Leu Leu Glu Gln Thr Gln Pro Ala  
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 Thr Pro Ser Leu Trp Lys Asn Lys Glu Gln His Leu Ser Glu Asn Glu  
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 Pro Val Asp Thr Asn Ser Asp Asn Asn Leu Phe Thr Asp Thr Asp Leu  
 515 520 525  
 Lys Ser Ile Val Lys Asn Ser Ala Ser Lys Ser His Ala Ala Glu Lys  
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 Glu Val Leu Glu Gln Leu Phe Lys Asp Thr Lys Pro Glu Leu Glu Ile  
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 Asp Val Lys Val Gln Lys Gln Glu Glu Asp Val Asn Val Arg Lys Arg  
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<211> 87

<213> Homo sapiens

<221> UNSURE

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			20					25					30		
Asn	Leu	Ser	Gln	Thr	Asp	Glu	Ile	Pro	Val	Leu	Thr	Leu	Lys	Asn	Xaa
		35					40					45			
Lys	Tyr	Gly	Thr	Phe	Val	Asn	Glu	Glu	Lys	Met	Gln	Asn	Gly	Phe	Ser

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 Lys Phe Arg Ile Glu Tyr Glu  
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                          20                      25                      30  
 Ser Ser Asp Leu Lys His Ser Ser Leu Cys Leu Val Asn Lys Gly Lys  
                          35                      40                      45  
 Leu Thr Ser Leu Asn Lys Lys Phe Met Lys Val Gly Glu Thr Phe Thr  
                          50                      55                      60  
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35 40 45  
Glu Asn Glu Val Asp Phe Ile Leu Leu Gly Gly Asp Leu Phe His Glu  
50 55 60  
Asn Lys Pro Ser Arg Lys Thr Leu His Thr Cys Leu Glu Leu Leu Arg  
65 70 75 80  
Lys Tyr Cys Met Gly Asp Arg Pro Val Gln Phe Glu Ile Leu Ser Asp  
85 90 95  
Gln Ser Val Asn Phe Gly Phe Ser Lys Phe Pro Trp Val Asn Tyr Gln  
100 105 110  
Asp Gly Asn Leu Asn Ile Ser Ile Pro Val Phe Ser Ile His Gly Asn  
115 120 125  
His Asp Asp Pro Thr Gly Ala Asp Ala Leu Cys Ala Leu Asp Ile Leu  
130 135 140  
Ser Cys Ala Gly Phe Val Asn His Phe Gly Arg Ser Met Ser Val Glu  
145 150 155 160  
Lys Ile Asp Ile Ser Pro Val Leu Leu Gln Lys Gly Ser Thr Lys Ile  
165 170 175  
Ala Leu Tyr Gly Leu Gly Ser Ile Pro Asp Glu Arg Leu Tyr Arg Met  
180 185 190  
Phe Val Asn Lys Lys Val Thr Met Leu Arg Pro Lys Glu Asp Glu Asn  
195 200 205  
Ser Trp Phe Asn Leu Phe Val Ile His Gln Asn Arg Ser Lys His Gly  
210 215 220  
Ser Thr Asn Phe Ile Pro Glu Gln Phe Leu Asp Asp Phe Ile Asp Leu  
225 230 235 240  
Val Ile Trp Gly His Glu His Glu Cys Lys Ile Ala Pro Thr Lys Asn  
245 250 255  
Glu Gln Gln Leu Phe Tyr Ile Ser Gln Pro Gly Ser Ser Val Val Thr  
260 265 270



Ser Leu Ser Pro Gly Glu Ala Val Lys Lys His Val Gly Leu Leu Arg  
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 Arg Gln Phe Phe Met Glu Asp Ile Val Leu Ala Asn His Pro Asp Ile  
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 Phe Asn Pro Asp Asn Pro Lys Val Thr Gln Ala Ile Gln Ser Phe Cys  
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 485 490 495  
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 Asn Glu Glu Asp Asp Glu Val Arg Glu Ala Met Thr Arg Ala Arg Ala  
 515 520 525  
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 530 535 540  
 Leu Met Ser Ile Asp Leu Ala Glu Gln Met Ala Asn Asp Ser Asp Asp  
 545 550 555 560  
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Arg Gly Gly Arg Gly Gln Asn Ser Ala Ser Arg Gly Gly Ser Gln Arg		
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Gly Arg Ala Phe Lys Ser Thr Arg Gln Gln Pro Ser Arg Asn Val Thr		
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Thr Lys Asn Tyr Ser Glu Val Ile Glu Val Asp Glu Ser Asp Val Glu		
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Glu Asp Ile Phe Pro Thr Thr Ser Lys Thr Asp Gln Arg Trp Ser Ser		
625	630	635
Thr Ser Ser Ser Lys Ile Met Ser Gln Ser Gln Val Ser Lys Gly Val		
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<400> 7

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<210> 8

<211> 680

<212> PRT

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<400> 8

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 Gly Asn Asp Thr Phe Val Thr Leu Asp Glu Ile Leu Arg Leu Ala Gln  
 35 40 45  
 Glu Asn Glu Val Asp Phe Ile Leu Leu Gly Gly Asp Leu Phe His Glu  
 50 55 60  
 Asn Lys Pro Ser Arg Lys Thr Leu His Thr Cys Leu Glu Leu Leu Arg  
 65 70 75 80

Lys Tyr Cys Met Gly Asp Arg Pro Val Gln Phe Glu Ile Leu Ser Asp  
 85 90 95  
 Gln Ser Val Asn Phe Gly Phe Ser Lys Phe Pro Trp Val Asn Tyr Gln  
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 Asp Gly Asn Leu Asn Ile Ser Ile Pro Val Phe Ser Ile His Gly Asn  
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 His Asp Asp Pro Thr Gly Ala Asp Ala Leu Cys Ala Leu Asp Ile Leu  
 130 135 140  
 Ser Cys Ala Gly Phe Val Asn His Phe Gly Arg Ser Met Ser Val Glu  
 145 150 155 160  
 Lys Ile Asp Ile Ser Pro Val Leu Leu Gln Lys Gly Ser Thr Lys Ile  
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 Ala Leu Tyr Gly Leu Gly Ser Ile Pro Asp Glu Arg Leu Tyr Arg Met  
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 Ser Trp Phe Asn Leu Phe Val Ile His Gln Asn Arg Ser Lys His Gly  
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 Ser Thr Asn Phe Ile Pro Glu Gln Phe Leu Asp Asp Phe Ile Asp Leu  
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 Ser Leu Ser Pro Gly Glu Ala Val Lys Lys His Val Gly Leu Leu Arg  
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 340 345 350  
 Gly Asn Ser His Gln Pro Glu Lys Pro Leu Val Arg Leu Arg Val Asp  
 355 360 365  
 Tyr Ser Gly Gly Phe Glu Pro Phe Ser Val Leu Arg Phe Ser Gln Lys

370                      375                      380  
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 385                      390                      395                      400  
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 Leu Ile Thr Lys Pro Ser Glu Gly Thr Thr Leu Arg Val Glu Asp Leu  
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 Val Lys Gln Tyr Phe Gln Thr Ala Glu Lys Asn Val Gln Leu Ser Leu  
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 Leu Thr Glu Arg Gly Met Gly Glu Ala Val Gln Glu Phe Val Asp Lys  
                     450                      455                      460  
 Glu Glu Lys Asp Ala Ile Glu Glu Leu Val Lys Tyr Gln Leu Glu Lys  
 465                      470                      475                      480  
 Thr Gln Arg Phe Leu Lys Glu Arg His Ile Asp Ala Leu Glu Asp Lys  
                     485                      490                      495  
 Ile Asp Glu Glu Val Arg Arg Phe Arg Glu Thr Arg Gln Lys Asn Thr  
                     500                      505                      510  
 Asn Glu Glu Asp Asp Glu Val Arg Glu Ala Met Thr Arg Ala Arg Ala  
                     515                      520                      525  
 Leu Arg Ser Gln Ser Glu Glu Ser Ala Ser Ala Phe Ser Ala Asp Asp  
                     530                      535                      540  
 Leu Met Ser Ile Asp Leu Ala Glu Gln Met Ala Asn Asp Ser Asp Asp  
 545                      550                      555                      560  
 Ser Ile Ser Ala Ala Thr Asn Lys Gly Arg Gly Arg Gly Arg Gly Arg  
                     565                      570                      575  
 Arg Gly Gly Arg Gly Gln Asn Ser Ala Ser Arg Gly Gly Ser Gln Arg  
                     580                      585                      590  
 Gly Arg Ala Phe Lys Ser Thr Arg Gln Gln Pro Ser Arg Asn Val Thr  
                     595                      600                      605  
 Thr Lys Asn Tyr Ser Glu Val Ile Glu Val Asp Glu Ser Asp Val Glu  
                     610                      615                      620  
 Glu Asp Ile Phe Pro Thr Thr Ser Lys Thr Asp Gln Arg Trp Ser Ser  
 625                      630                      635                      640  
 Thr Ser Ser Ser Lys Ile Met Ser Gln Ser Gln Val Ser Lys Gly Val  
                     645                      650                      655  
 Asp Phe Glu Ser Ser Glu Asp Asp Asp Asp Asp Pro Phe Met Asn Thr  
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Ser Ser Leu Arg Arg Asn Arg Arg  
675 680

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